Workforce Safety & Insurance

To us, it's personal.

INFORMATION TECHNOLOGY TRANSFORMATION PROGRAM

BUSINESS CASE

MARCH 15, 2006

PRESENTED BY

AdvanTech, LLC

Innovative Technology Management

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Document Revision History

Date	Description	Author
3/15/2006	Final Released Version from Advantech	AdvanTech
4/3/2006	Replaced CAPS with Workers Compensation System	Tim Schenfisch
4/28/2006	Added ND Integrated to Workers Compensation System	Tim Schenfisch

Section 1 - EXECUTIVE SUMMARY

WSI has concluded that a comprehensive Information Technology Transformation Program (ITTP) is required to migrate its existing core application systems, and create a state-of-the-art technology environment for its new, web-enabled applications. The primary business drivers for the ITTP are:

- WSI strategic initiatives and desired outcomes that are dependent on effective technology;
- Enhanced functionality that will increase staff efficiency and improve customer service;
- New technology tools and platforms that will enable quick deployment of future applications.

This Business Case document represents an analysis and justification for the ITTP. This document has been prepared to align with WSI's Strategic Information Technology Plan. These two documents represent the initial deliverables of the ITTP, and the IT Plan provides additional details related to the projects discussed herein.

WSI is facing a rapidly changing business and technology environment. Stakeholders are demanding an easier and more responsive interface with the agency, particularly with more self-service functionality provided online. The primary information systems that support WSI business operations were developed approximately 10 years ago. Over the past six years, numerous enhancements and additions have been made to these systems. However, while these systems currently meet the basic business needs of the agency, they lack certain functionality that would enable WSI to further improve operations. In addition, a significant amount of time is still spent maintaining these systems, leaving relatively little time to support new WSI strategic initiatives.

The primary goals for the ITTP are:

- Provide a solid foundation for implementing and maintaining information technology systems using "best practices" for project planning and management, system development, and business process and organizational change;
- Provide an overall technology architecture design that provides the flexibility to remain current technologically and respond to changing business conditions;
- Provide an IT framework and organization structure that is driven by WSI's business requirements and strategic objectives;
- Implement modern systems that provide solid business functionality, conform to the overall architecture design, and incorporate the flexibility and scalability to meet future needs.

ITTP has a high level of importance for ensuring effective workers' compensation administration in North Dakota. In order to identify the best solution, maximize results and minimize risks, WSI has retained AdvanTech, LLC, to perform a series of planning, positioning and project management services.

ITTP is composed of four separate projects:

- Project 1- ND Integrated Workers Compensation System
- Project 2- Web Portal
- Project 3- Data Warehouse
- Project 4- Customer Relationship Management System (CRM)

The ND Integrated Workers Compensation System represents the primary focus of the program at this point. There are three options for approaching this project:

- Keep current systems and use existing technologies to deploy functionality to the Web.
- Design and build a new system from scratch.
- Procure and implement a commercial-off-the-shelf (COTS) package.

AdvanTech has recommended that WSI use a COTS approach, assuming a product can be identified that satisfies established requirements without exceeding cost constraints. With a COTS package, the basic architecture and programming are already complete. The package can be deployed relatively rapidly compared to customized systems, while reducing technology risks. An initial review of possible COTS packages indicates that some provide broad functionality, and appear to be priced to fit within planned expenditure levels. They also continue to evolve, adding capabilities with each new release.

The Web Portal project will provide a single point of entry, consistent look and feel, and cohesive method of connectivity for WSI systems, staff, and stakeholders.

A WSI Data Warehouse, and Customer Relationship Management (CRM) system, are future planned projects that will provide value added services for both WSI internal users and external stakeholders. The Data Warehouse and related analysis tools will enable WSI to make better business decisions based on various views of their data. CRM will provide enhanced communications and record tracking capabilities for interacting with employers, claimants, and medical providers, as well as creating work efficiencies for WSI staff.

During the preparation phase of the ND Integrated Workers Compensation System project, WSI will perform a number of planning and positioning activities that will leave WSI with an overall design for a modern, stable technology architecture and the IS organization, methodologies, business processes, documents, and management tools necessary to successfully complete all of the projects mentioned above.

AdvanTech has conducted an initial cost/benefit analysis identifying those areas within WSI where the added capabilities of the new system could potentially yield savings. The most likely areas are related to deploying value added functionality and increasing productivity. The efficiencies gained will allow employees in WSI's Injury Services and Employer Services departments to focus more directly on claims management and control programs, which will in turn result in claims cost savings. The potential net savings are estimated at $2.7 million annually. The total costs for the program are estimated at $12 - $14 million, resulting in a payback period of 4½ to 5 years. It should be noted that there are many factors that affect claims costs, and isolating savings specifically generated by a new system is difficult.

The ITTP Business Case has been analyzed in more detail in the following pages using the standard business case template for information technology initiatives recommended by the State of North Dakota Information Technology Department (ITD).

Section 2 – PROGRAM DESCRIPTION

Program Name: Information Technology Transformation Program

Program Short Name: WSI-ITTP

Agency: Workforce Safety & Insurance

Business Unit/Program Area: All

Type of Program: New Initiative

Date: March 15, 2006

Version: 1

ITTP is a 7-9 year program that will convert key claims and policy administration functionality to a modern integrated system that is more capable of quickly adapting to the changing needs of internal and external stakeholders. The ITTP initiative will replace systems that were designed and deployed up to ten years ago. These systems will also incorporate technology and product upgrade programs that will provide an extended useful life.

Upon program completion, WSI will be equipped with: more mature business methodologies, processes and project management techniques; a fully integrated claims and policy system; an enhanced access to information by employers, claimants and medical providers; a comprehensive data warehouse; and a new customer relationship management system.

A **Strategic Information Technology Plan** has been developed which provides details from a technology perspective on plans for replacing WSI core systems and moving to a web-enabled architecture. This program business case links directly to that plan and provides additional justification for proceeding with the projects identified.

The complete program will consist of four projects, recommended to commence in the following order:

- **Project 1 – ND Integrated Workers Compensation System:** Replacing the existing claims management system (CMS), policy information computer system (PICS), work flow management system (Work Manager), and other interfacing sub-systems, with a more up-to-date and comprehensive package;
- **Project 2 – Web Portal:** Developing a single point of entry, consistent look and feel, and cohesive method of connectivity for WSI systems, staff, and stakeholders;
- **Project 3 – Data Warehouse:** Implementing a tool to better organize, analyze, understand, and report WSI's business operations and trends;
- **Project 4 – Customer Relationship Management System (CRM):** Implementing a state-of-the-art tool to better manage stakeholder information and contacts, improving customer service and WSI productivity.

Problems associated with the aging technologies of CMS/Work Manager and PICS, and their inability to seamlessly transition information between systems, are considered the most critical technology issues facing WSI at this time. The implementation of the ND Integrated Workers Compensation System will address these issues and provide immediate benefits. The Web

Portal, Data Warehouse, and CRM will further optimize these benefits by providing enhanced online access for various stakeholders, increased ability to manage and analyze data, and improved customer service.

The primary objectives for the ITTP include:

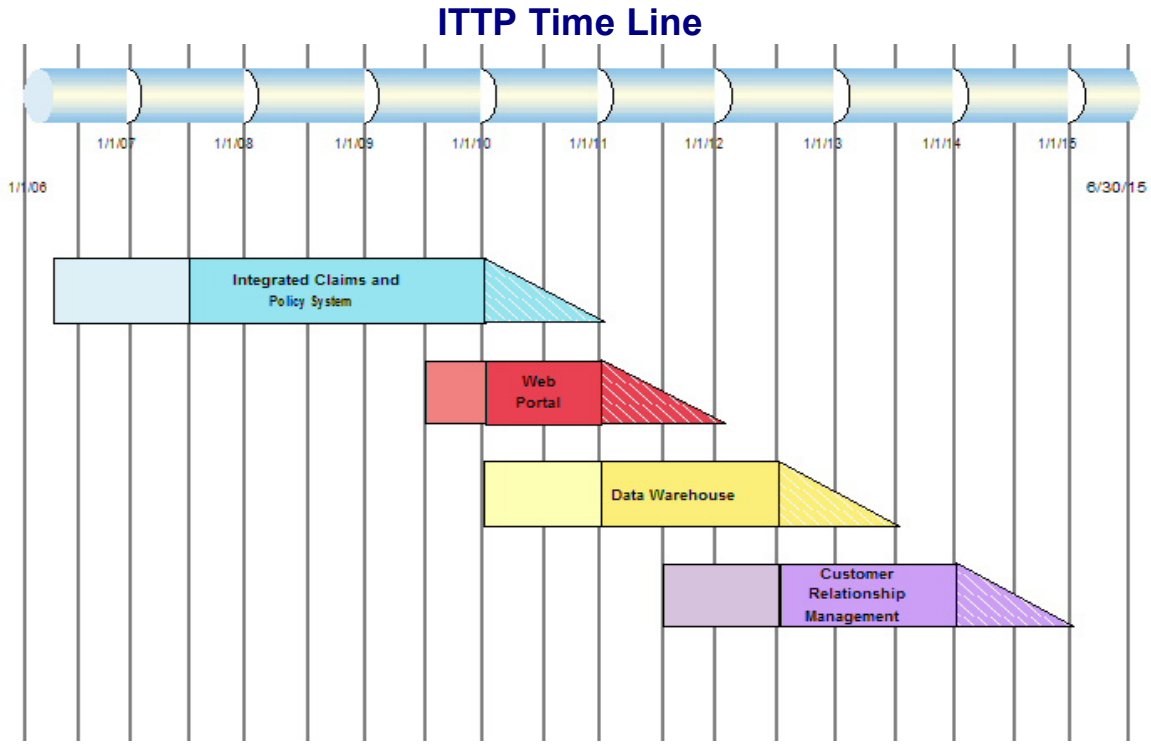
- Developing an overall architecture under which WSI's primary systems will operate.
- Transitioning the Information Services Department by reorganizing, training staff to meet new technology demands, recruiting for additional key skill sets as needed.
- Implementing focused data cleanup efforts and migration of data to the new system.
- Migrating claims (including medical and indemnity) and policy applications to a web-enabled technology platform.
- Implementing a fully integrated insurance administration system to support the following functions:
  - Administration of customer information (employers, claimants, providers, other)
  - Interfaces with front-end processing (Online Reporting, EDI, OCR, PBM, Payroll Reporting) and data entry systems
  - Payment processing
  - Overpayment and subrogation processing
  - Reserving (manual and interfacing with MIRA)
  - Policy issuance and premium collection
  - Loss control and prevention programs
  - Return-to-work programs
  - Collections
  - Audit
  - Litigation management
  - Dispute resolution
  - Diary systems
  - Records management
  - Document management and workflow
  - Forms management and letters issuance
  - Report generation
  - CRM and data warehouse applications
  - Ad hoc data inquiry and analysis

Major activities for the ND Integrated Workers Compensation System project will include;

- Transitioning WSI's Information Services Department organizational structure and skill sets to prepare for supporting this new technology;
- Establishing a framework and methodologies for project planning and management, system development and testing, business process assessment and reengineering, and organizational change management;
- Defining functional and technical requirements for the new system;
- Preparing an RFP, evaluating vendors and products, and selecting the appropriate COTS package;
- Configuring the selected COTS software package to meet specific WSI requirements;
- Converting data from the existing systems;
- Testing the functionality of the system and the accuracy of the converted data;
- Training system users and operators.

WSI has contracted with AdvanTech, LLC, to provide professional project planning and management services. AdvanTech has coordinated the development of the Strategic Information Technology Plan and this related ITTP Business Case. They will also coordinate the planning and system procurement activities, and will provide project oversight for the ND Integrated Workers Compensation System project. It is currently planned that WSI will increase its internal PM capabilities and manage the remaining projects in house.

The figure below depicts the high-level timeline for accomplishing the projects outlined above:



Section 3 – BUSINESS NEED/PROBLEM

WSI provides workers' compensation coverage for most of North Dakota's employers and their employees. There are approximately 20,000 policyholders and close to 20,000 new claims per year. Annual Gross Earned Premium is approximately $114 million and annual claims benefits paid approach $85 million. WSI administers this program utilizing CMS/Work Manager, PICS, and Great Plains accounting software. FileNet is used as the imaging system. The core production systems (CMS & PICS) were custom built starting 10 years ago. With each of these systems, a significant amount of effort is still required to repair defects and maintain the system.

Over the past six years, the WSI IS staff has made numerous enhancements and additions to these systems. Users have also developed a number of Access databases and spreadsheets to handle functions where the primary client-server applications are not meeting WSI business needs. WSI's IS staff spends the majority of its time fixing and enhancing existing systems and interfaces, leaving very little time for supporting new WSI strategic initiatives.

WSI internal and external stakeholders are increasing their requests for more functionality (as evidenced by usage of online reporting), while demanding that the information be safe and secure. Additionally, individuals and business owners are requesting streamlined methods of dealing with WSI in order to improve their own efficiencies.

WSI requires a stable system which:

- Provides state-of-the-art business functionality;
- Is built on a modern, industry standard technology platform that provides maximum flexibility going forward;
- Allows IS staff to focus on developing new services and supporting increased data analysis;
- Is fully integrated between Injury Services and Employer Services;
- Is simple to administer;
- Can push customer interfaces out to the web to reduce processing time and phone calls for information;
- Can provide important information to field staff as they service customers;
- Reduces printing and mailing costs;
- Offers streamlined centralized service to WSI stakeholders while improving internal processes.

A core workers' compensation system must offer **Claim Indemnity, Medical, and Policy Services** functionality. These 'three legs of the chair' are crucial to operations, and if properly integrated provide seamless and efficient processes between these key functional areas. WSI's underwriting leg (PICS) is interfaced, but not integrated, with the indemnity and medical legs (CMS), requiring a considerable amount of manual processing. This lack of integration hampers the Employer Services Department in its efforts to increase value to policy holders by providing more effective loss control services, and streamlining their interfaces with North Dakota employers.

In June of 2005, WSI engaged Gartner, Inc. as an objective outside party to assess CMS on both the technology platform on which it operates and the business value it provides. The results and recommendations of this assessment were:

- CMS provides reasonable core business value, but is not positioned to provide future capabilities for strategic or transformative support.
- CMS does not provide a number of the features and functions resident in most current insurance claims processing solutions.
- CMS will require a number of significant enhancements, and system acquisition and integration efforts, in order to address the strategic outcomes defined by WSI.
- The enhancements will be complex and costly due to the current application architecture and technology platform.
- The bug-fix and enhancement backlogs are eroding the business value and data integrity issues are putting WSI at risk.
- The technology and application architecture, upon which CMS is built, limits the ability to meet new and emerging business requirements.
- The current technology is in a state of transition which may place WSI in a position where software platforms are unsupported or incompatible.
- In general, the WSI-IT organization will need to enhance its capacity and capabilities to address these initiatives as well as ongoing operations.

In December 2005, WSI engaged AdvanTech, LLC to support the development of a Strategic Information Technology Plan, a Business Case, and Project Charter. As part of this effort, AdvanTech has performed a limited validation of Gartner's findings and generally agrees with their conclusions and recommendations. AdvanTech also believes that some of these same issues apply to PICS and Work Manager, creating the same need to consider replacing those systems in the near future.

There is one important clarification that should be made. Gartner's report indicated that 75% of application programmer time is spent on data and bug fixes. In discussions with IS staff, the 75% number represents time spent on both fixes and enhancements to existing systems, and not solely on CMS/Work Manager. However, this still places limits on the amount of time the programming group is able to spend on supporting new WSI strategic initiatives.

3.1 Additional Issues

The following additional business and technical issues have been identified:

3.1.1 Business Issues

The IS staff does a good job of continuously performing bug fixes and enhancements to CMS and PICS. However, there is a constant backlog of these requests, making it difficult to satisfy them all in a timely manner and preventing WSI from implementing more major enhancements that will improve service and create efficiencies. Over the years business units have developed numerous workarounds to compensate for some of the gaps in functionality. The following business needs have been identified:

- The integration between PICS and CMS needs to be improved. The current process is costly and time consuming;
- System navigation is sometimes inefficient and is causing ergonomic issues;
- Certain key screens (e.g. compensation payment) are difficult to read and understand;
- There is limited capability for formatting and editing certain hard copy outputs (e.g. billing statements);
- Provider participation in electronic data interchange (EDI) needs to be expanded. This will reduce data entry and manual review processing;
- WSI billing statements are complicated and are not user friendly. There is limited ability in the current system to make modifications;
- Legal entity functionality is complicated and the current system limits the ability to modify or correct litigation information;
- Processes to adjust payments (overpayment, underpayments, and subrogation) are so complicated that only a few individuals in WSI can manage and understand them;
- Legislative changes can be difficult to implement;
- There is no functionality to support the Office of Independent Review for appeals and dispute resolution;
- Generation of reports can be cumbersome and there is minimal data analysis capability;
- There is minimal content management ability;
- There is a lack of common process templates;
- Business units have developed a number of separate Access databases to support processes not handled by the primary systems. This creates the potential for data integrity and security issues;
- System security needs to be improved;
- Customer Relations Management and Data Warehouse/Analytics functionality is needed to provide value added services to WSI customers and create operational efficiencies. The existing database structure and integrity is not satisfactory to deploy these applications.

3.1.2 Technology Issues

WSI's current systems and architecture are aging, and it is becoming increasingly difficult to meet changing business needs and strategic objectives. The challenges related to maintaining custom built applications that must be addressed are:

- WSI is not in the business of developing software, nor should it be. It is much more difficult for WSI to stay abreast of technology changes than it is for an entity focused on developing a commercial software package and keeping it up-to-date;
- Because custom built software does not have a formal product upgrade path, it generally has a shorter life cycle than a COTS package and requires a complete system replacement more frequently;
- Business rules are hard-coded into the system, requiring technical support when making modifications.

3.2 Solution

There are various alternatives for providing the technology environment WSI needs to meet its strategic objectives:

- Continue to utilize the current systems, performing fixes and enhancements as possible with IS staff, and use existing technologies to deploy functionality to the Web;
- Develop custom software tailored to the specific business needs, either with internal IS staff or using an outside development vendor;
- Deploy a COTS software package and modify business processes to meet the software as much as possible, controlling the level of customization to ensure WSI can take advantage of future upgrades to the COTS product.

Keeping the infrastructure as is does not change the underlying technology and design inadequacies of its existing core system, nor does it create any significant improvements in its capabilities or useful life. An effort could be undertaken to migrate these systems to some other platform and otherwise modernize them, but this effort will likely only be a stop-gap measure, and a costly and time-consuming detour from the necessary replacement. The need to replace the existing systems will become more critical as time passes. .

Designing and building a new system that is totally customized for North Dakota is an extremely lengthy and expensive option. Custom development of an integrated system to handle all aspects of claims and policy management could take five or more years, and could cost in excess of $20 million. In addition, custom development efforts have a fairly high rate of failure in meeting defined requirements and user expectations. This approach could jeopardize WSI's ability to meet its strategic initiatives.

AdvanTech has recommended that WSI acquire and implement a commercial off-the-shelf (COTS) integrated ND Integrated Workers Compensation System. With a COTS package, the basic architecture and programming is already complete. Since insurance processing and administration is generally similar across jurisdictions, certain software companies have been able to develop packages that have much of the core functionality already inherent in the system. This will allow the main emphasis of the project to be on configuring the system with the specific business rules applicable to North Dakota.

With a COTS approach, the project will be able to deploy the system rapidly. The estimated time for total implementation is 2-2½ years (compared to 4-6 years for custom development). The project can also be subdivided into phases whereby specific elements of functionality can be put into production at earlier stages, allowing the project to get something in front of the users quickly. WSI will be able to make changes on the fly, since the business rules are maintained in reference tables, not embedded in "hard" code. Use of a COTS package will also allow the project to focus testing on business rules, rather than on code and infrastructure.

Using a COTS package, the majority of functions are available through configuration or table entries, rather than coding. With this in mind, WSI will take the approach of acquiring a system that best meets its overall functional and technical requirements, but will be required to realign some of its business processes to the manner in which the COTS system is designed, rather than trying to customize the system. Business processes will be analyzed and adjusted to optimize the power of the new system. This approach will provide added opportunities for WSI to increase operating efficiencies. The approach will also ensure that upgrades to the product can be more easily incorporated, and that overall maintenance costs will be minimized.

Compared to designing and programming a customized system from scratch, implementing a COTS package will:

- Reduce risk (e.g. established design, proven in other locations)
- Reduce overall cost – implementation and maintenance
- Shorten the implementation schedule
- Enable WSI to take advantage of upgrades being regularly made to the core product
- Enable North Dakota to quickly adapt to tomorrow's business challenges

During the preparation phase of the project, WSI will finalize requirements, develop an RFP, and select a vendor. The intent of the selection process will be to identify a package that provides solid functionality in a best fit, cost effective manner. WSI will also be looking for a vendor that understands workers' compensation insurance processing and whose system has been successfully employed in multiple workers' compensation insurance companies. This will ensure that the final integrated product has been designed for the business of insurance, and will be rich with features and functions.

WSI will also develop a set of methodologies and processes related to planning, development, implementation, operation and management of its IT systems and infrastructure. The conceptual design of the overall Service Oriented Architecture (SOA) contemplated by WSI will also be completed during that time. The SOA will provide the framework for all future systems projects, and conforms to the direction being considered by ITD for the State of North Dakota.

Section 4 – CONSISTENCY/FIT WITH ORGANIZATION'S MISSION

The following section details WSI's mission, purpose and strategic outcomes. These outcomes are tightly tied to system capability and functionality. Current systems are limiting the organization's ability to efficiently achieve these outcomes. Execution of the ITTP as described in this Business Case and the Strategic Information Technology Plan will allow WSI to leverage new technologies to achieve the desired outcomes more quickly and with less cost.

4.1 Mission

Our Mission is our Passion. Our Passion is North Dakota's Workforce. To Us, It's Personal.

4.2 Purpose

Our Purpose is simple – To help North Dakota's workforce get what they want in the most economical way possible.

4.3 WSI Board of Directors Established Outcomes

WSI has completed an extensive strategic planning effort. As part of that process, six key outcomes were identified and approved by the Board of Directors.

Outcome 1: Continue to Develop and Expand Proactive Safety Programs

The ITTP will provide WSI with tools that enable more extensive analysis of data, including the ability to identify trends in claims by industry and type of worker. This enhanced analysis capability will facilitate the development of loss prevention programs.

In addition, enhanced functionality will create efficiencies and increase employee productivity, allowing more time to be focused on proactive services.

Outcome 2: Streamline Reporting /Processing

The new IT architecture, applications, and methodologies planned for the ITTP will provide stakeholders with more direct and expanded access to services. The new IT environment will also provide the flexibility and scalability to meet future needs.

Outcome 3: Improve Communications with North Dakota's Workforce, Employers, Medical community, and WSI employees

The new IT architecture, applications, and methodologies planned for the ITTP will provide additional means for interacting with internal and external stakeholders. The new technology environment will also provide the underlying architecture to support an Information Center.

Outcome 4: Achieve/Guarantee the Integrity of WSI's Data and Data Systems

The specific objectives of the ITTP are to develop an overall systems architecture that positions WSI for the future, enhance WSI's primary systems, add new systems and tools that provide value added functionality (Web Portal, Data Warehouse, CRM), and provide an efficient means of sharing data across systems to better ensure the integrity of the data.

Outcome 5: Assure Fund Solvency with Integrity

The ITTP will provide WSI with tools that enable more extensive analysis of information, enabling the agency to better evaluate and monitor the impact of any number of programs and initiatives.

Outcome 6: Enhance WSI Staff Development

The ITTP incorporates skills development for Information Services staff that will help keep them current with emerging technology trends. The program also includes training for users in all elements of the new systems, including such areas as advanced data analytics and decision support.

Section 5 - COST BENEFIT ANALYSIS

There are generally two reasons that an organization allocates resources to a technology project. The first is environmental (legislatively mandated or customer driven), and the other being financial (the organization is expecting a significant return on their investment). This business case provides justification for replacing WSI's core computer systems on both environmental and financial grounds. Customers are requiring value added services and the system is getting beyond its capabilities. New technology will allow WSI to create efficiencies, earning it a return on investment.

5.1 Benefits

ITTP will provide a number of benefits to WSI. Some of the specific benefits include:

- Reduced claims costs;
- Reduced operating and maintenance costs;
- Improved customer service;
- Speedier processing of benefits;
- More reliable data, with better analytical capabilities;
- Improved productivity and workflow management;
- Improved system scalability, flexibility and adaptability to emerging trends.

Estimates of costs and the potential savings by department shown below represent a best effort evaluation utilizing AdvanTech expertise and resources from within the WSI organization. The actual results cannot be easily measured or guaranteed, and will not be fully realized until after the ND Integrated Workers Compensation System is in production.

5.1.1 Improved Customer Service

From a customer service perspective, a new system will provide a sound technological platform for launching innovative services online. Opportunities will be available to push customer required information and services out to the web. Some of the efficiencies this will create include:

- **Injured Workers**: online access to medical records, status of indemnity and medical payments, and communications with adjusters.
- **Employers**: access to loss history, loss prevention and other safety materials.
- **Providers**: enhanced EDI and medical records submissions, electronic communications with staff, and online access to payment status and histories.
- **Legal Community**: online access to client records and payment histories.

Estimating savings on the value of improved customer service as defined above would be difficult. However, it is clear that the benefits would increase customer satisfaction and consequently reduce employee time spent on customer issues/complaints. The net result will be the ability to spend more time on claims prevention activities, reducing overall claims costs.

5.1.2 Increased Employee Productivity

In the ***Injury Services Department*** efficiencies will be realized when processing medical payments, servicing incoming phone calls, and adjusting claims. The following estimates are provided:

- Efficiency Gains:
  - Adjusters and Medical Processors **~24,000 hours annually**

    It is estimated that up to two hours per day will be saved by adjusters and medical processors (approximately 50) when medical payments are processed automatically, redundancies are removed*, indemnity payment processes are simplified, reserving is more automated, phone calls are reduced, and processes for updating NOD codes are improved. (50 staff x 2 hrs x 240 working days a year = 24,000)

    ** Note: WSI contracted with Orient Point Consulting LLC to perform certain time and motion studies. Their report of June 2005 provides more details on this point.*
  - Call Center **~1,100 hours annually**

    Estimate 10% reduction in call center time (6 staff) if web access to basic information is available to providers, employers and claimants. (6 x 240 days x 8 hrs x .10 = 1,152)
- Dollars Saved:
  - Staff Reductions **$0 annually**

    No savings are planned from staff reductions. Time saved from efficiency gains will be applied to other claims management and control tasks, which will result in reduced claims costs.
  - Reduced Claims Costs **~$1,700,000 annually**

    With increased time (25,000+ hours) to focus on initial compensability investigations, supporting early return-to-work programs, managing medical utilization, auditing high dollar medical bills, and focusing resources on managing very high cost and catastrophic injuries claims, WSI will be able to reduce indemnity and medical costs. There are many variables that affect annual claims costs for WSI, and isolating savings to specific improvements generated by an upgraded claims system is problematic. However, WSI believes a 2% savings rate due to improved Injury Services represents a conservative and supportable estimate ($85 million x .02).

In the ***Employer Services Department*** efficiencies will be realized when employers are able to access loss histories, make payments, and obtain safety services on-line. Manual efforts to reconcile with CMS will go away, and loss control/prevention consultants will be able to spend more time focusing on reducing frequencies and severities. The following estimates are provided:

- Efficiency Gains:
  - Employer Services **~23,700 hours annually**

    It is estimated that approximately 23,700 hours will be saved annually by Employer Services staff when policy and claims systems are fully integrated, employers have access to online payments and remittance, and loss control services and reporting are available through the web. This is based on an evaluation of a number of specific activities performed by the department.
  - Premium Payments **~600 hours annually**

    It is estimated that time savings will be achieved with increased electronic processing of policy premiums (25 payments per day x .1 hour to process x 240 days).
- Dollars Saved:
  - Staff Reductions **$0 annually**

    No savings are planned from staff reductions. Time saved from efficiency gains will be applied to loss control and prevention tasks, which will result in reduced claims costs.
  - Reduced Claims Costs **~$1,700,000 annually**

    With increased time (24,300 hours) because the policy system is integrated with the claims system, auditors and loss prevention specialists will be able to more efficiently target higher value employers for audit and review, and zero in on high loss industries and accident types for development of safety programs to reduce severity and frequency. As stated above, there are many variables that affect annual claims costs for WSI, and isolating savings to specific improvements generated by upgraded claims and policy systems is problematic. However, WSI believes a 2% savings rate due to improved employer services represents a conservative and supportable estimate ($85 million x .02).

5.1.3 Reduced System Fixes/Maintenance

In the ***Information Technology Department*** efficiencies will be realized when refocusing development efforts away from defects and enhancements to launching the new system. The following estimates are provided:

- Efficiency Gains:
  - System Defects **~4,700 hours annually**

    IT development and analysis staff spend 35% of their time working on CMS and PICS defects. (7 staff x 240 days x 8 hrs x .35 = 4,704)

- Integration and Processing Issues **~400 hours annually**

  IT staff spend 10% of their time on PICS interfacing and synchronizing issues. (2 staff x 240 days x 8hrs x .10 = 384)

♦ Dollars Saved:

- Staff Reductions **$0 annually**

  No savings are planned from staff reductions. Time saved from efficiency gains will be applied to activities geared toward keeping systems up to date and providing more functionality for users and stakeholders.

5.2 Costs

The following cost estimates reflect of additional costs to WSI as a result of the four projects constituting the ITTP. These estimates are fairly high level at this time due to the duration of this plan, the dynamic nature of technology and related costs, unknowns related to business requirements, and the need to obtain formal bids from the potential software vendors.

It is estimated that the total cost of this program will range from **$12 - $14 million**. These costs have been derived from five major cost components: software, hardware, services, project operation expenses and contingency.

5.2.1 Software

The largest element of the software costs is the license for the COTS products (ND Integrated Workers Compensation System and CRM) and the data analytics tools associated with the data warehouse. Detailed requirements will be defined and the software will be procured using an RFP process. The estimate for these costs is based on the experience of other states that have completed similar projects, and a cursory review of products currently available on the market. Also included in the software category are any tools to be used to support the programming, configuration, migration, and documentation of the systems. Software already purchased and in use by WSI will not be included.

5.2.2 Hardware

Hardware costs consist primarily of the servers that will be used to run the COTS applications, the Web Portal and the related databases. The costs include provision for any additional hardware that will be needed to maintain the production environment, along with the capacity to provide mirrored back-up and continued development and testing. This assumes that the currently installed workstations within WSI are capable of supporting the new web-enabled user interface and will continue to be upgraded in the normal course of business.

5.2.3 Services

These costs include the services acquired from outside vendors to support the implementation of the COTS packages, development and deployment of the Web Portal and Data Warehouse, user and technical training for each of the new systems and tools, and the planning, preparation and management of the ND Integrated Workers Compensation System project. The estimate does not include any costs for WSI personnel assigned to any of the four projects.

5.2.4 Project Operating Expenses

Project operating costs consist of general overhead expenses for maintaining a project office including space, equipment, and network connectivity.

5.2.5 Contingency

With projects of this nature, there is a level of uncertainty at the early planning stage related to some cost elements. This necessitates the inclusion of a contingency amount in the budget to cover unforeseen circumstances. As an example, the costs of the COTS software license and related implementation services represent the major portion of the budget. Since the bidding process has not yet occurred, there is a possibility that the prices in the winning proposals will be different than the estimated costs used in the estimate. Also, because the Data Warehouse and CRM projects are scheduled for later years, the costs included in the estimate for those projects are more conceptual in nature.

5.2.6 Project Cost Estimate

The following table reflects the initial estimate for the projects incorporated in the ITTP:

WSI-ITTP
Project Cost Estimates

		Project				
		IWCS	Web Portal	Warehouse	CRM	Total
Software Licenses		$ 2,000,000	$ 300,000	$ 300,000	$ 300,000	$ 2,900,000
Hardware & Infrastructure		300,000	100,000	100,000	100,000	600,000
Services		5,000,000	900,000	1,000,000	1,000,000	7,900,000
Project Operating Costs		200,000	50,000	50,000	50,000	350,000
Contingency	15%	1,125,000	202,500	217,500	217,500	1,762,500
Total		$ 8,625,000	$ 1,552,500	$ 1,667,500	$ 1,667,500	$ 13,512,500

[BF1]

5.2.7 Ongoing Operating Costs

The incremental operating costs for the new systems contemplated in the ITTP consist of the annual software maintenance fees paid to the vendors on COTS packages and other software tools, and two additional FTEs for a System Engineer/QC and a Test Engineer/QA as specified in the Strategic Information Technology Plan. Once all the projects have been completed, these costs on an annual basis are estimated to be:

- Software Maintenance **~$580,000**
  Assumes a maintenance fee of 20% of the original license ($2,900,000 x 20%)

- Additional IS Staff **~$78,000**
  Assumes one net additional FTE at $60,000 salary plus 30% for benefits (1 x $60,000 x 1.3)

For the purpose of this analysis, it is assumed that the initial purchase of the hardware for the new systems is included in the project budget, but that the ongoing charges ITD for hosting and replenishment the hardware will be similar to what WSI is currently incurring.

5.3 Analysis

The following summarizes the potential cost savings and compares them to the overall program estimate to calculate a payback period.

WSI-ITTP
Program Payback

Cost Savings				
Reduced Claims Costs				$ 3,400,000
Injury Services	2.0%	$	1,700,000	
Employer Services	2.0%	$	1,700,000	
Incremental Operating Costs				
Software Maintenance				$ (580,000)
Additional IT Staff				$ (78,000)
Net Cost Savings				$ 2,742,000
Total Program Cost				$ 13,512,500
Payback Period			Years	4.9

5.4 Funding

WSI is funded exclusively from premiums collected from policyholders and earnings on reserves. The agency must also obtain approval from the Legislature for their biennium budget. WSI's current financial position is solid, but funding for the bulk of the ITTP was not requested nor included in the 2005-2007 biannual budget.

The preparation phase for ND Integrated Workers Compensation System project, including the requirements gathering and RFP development will be performed during the 2005-2007 biennium. Funding for those efforts will be generated from savings in WSI operational budget items. Funding requirements for the remainder of the projects incorporated in the ITTP will be spread over the entire duration of the ITTP to match the expenditure cycle for each project. Based on this, it is anticipated that an appropriate amount will be included in each WSI budget request during that period.

Section 6 – PROGRAM RISKS

WSI will face a variety of risks during the execution of the ITTP. These risks can generally be divided between technology risks and project risks. Examples include:

- **Technology Risks**
  - System capability
  - Functionality gaps
  - Technical infrastructure
  - System architecture
  - Security
  - System maintenance and supportability
  - Expandability
- **Project Risks**
  - Cost
  - Schedule
  - Unclear requirements and scope creep
  - Excessive customization
  - Data conversion problems
  - Availability of resources
  - Organizational change
  - Staff skills gaps
  - Stakeholder communications and buy-in

Each of these areas requires ongoing monitoring and a plan for mitigating the risk. In the case of technology, the risk will be minimized by selecting COTS packages for the ND Integrated Workers Compensation System and CRM that have been proven to work in other state workers' compensation funds. The selected systems should be developed using current programming tools that support an open architecture and work with WSI's selected database (Oracle) and imaging system (currently FileNet). The systems should also be designed to operate in an n-tier environment to provide maximum flexibility and cost effectiveness in hardware selection.

To effectively manage project risk, WSI will take several key steps. First, WSI has contracted with a professional project management firm (AdvanTech, LLC) to provide planning and oversight services. AdvanTech has particular strength in worker's compensation systems and working with state governments.

Second, the selection process used to acquire COTS products will also require the software vendor to provide implementation support services with personnel that understand both the system and the business of worker's compensation administration.

Finally, the activities conducted during the preparation phase of the ND Integrated Workers Compensation System project will position WSI to utilize implementation methodologies that have been proven successful. These will incorporate the areas of system configuration and development, testing, data conversion, user training, technical knowledge transfer, and business process and organizational change management. The program will also employ widely accepted tools and processes for monitoring and controlling project scope, schedule, cost and quality.

Potentially, the single biggest risk for North Dakota and WSI is to not proceed with ITTP. Without applications built on platforms that are capable of meeting current and changing business needs, WSI will continue to fund efforts to maintain a system that needs replacement, and delay defined customer service enhancements and operational efficiencies.